Tiffany Lee Learning Theories

Social Learning Theory (Bandura) http://www.learning-theories.com/social-learning-theory-bandura.html

Description:

Social Learning Theory is how people learn by observing other peoples' behaviour, attitudes and outcomes. Human behaviour is learned through a model and how the model acts. The behaviour of students' learning will create the climate of the classroom.

Useful in Math:

I find that this learning theory can be useful because if the teacher can set a positive tone for the class then the students will have a optimistic outlook towards mathematics. For example, if the teacher can be enthusiastic, excited and passionate about teaching math, then the students will reciprocate that and receive positive learning. However, I can see a negative side to Social Learning Theory. It may be hard to inspire certain students and their behaviour in class can bring other students' learning down. Other students might see the students who aren't engaged in class and follow their negative behaviour. If one student has a negative attitude towards the class, it won't create a positive environment and this can cause student's to not enjoy math. The teacher can also create a negative climate if the teacher has a negative attitude towards math which might make the students follow. For example, if the teacher doesn't care about the student's learning in math, then the students won't care for math.

Attribution Theory (Weiner): http://www.learning-theories.com/weiners-attribution-theory.html

Description:

The ability to explain the reasoning and use of carrying out an action. This theory allows you to know what the point is and how to apply it.

Useful in Math:

I think the Attribution Theory is very useful in Math because it allows learners to realize what the point of math is. Why do we do math? Allowing students to see the application behind what they're learning, they can see more relevance with math in regards to everyday life. If the students can actually see how to apply math, they might be able to understand it more. Also, if the students can see where to use the math they've learned, then I believe it means achievement and they really understand the concept and are not just memorizing. The Attribution Theory gives the students a reason to learn math.

Cognitivism: http://www.learning-theories.com/cognitivism.html

Description: This paradigm believes that the student's mind needs to be understood in order to know how the student learns best. It also states that minds are like computers; you learn something, they have to process what they've learned and then there are outcomes.

Useful in Math: I believe that Cognitivism is very useful in math, without it, it would be very hard to learn. In math (and all other subjects), teachers teach and students learn the basics first. You start off with step 1, and then once it is understood, you can move onto step 2 and so forth. For example, you need to know how to add before you can multiply. So the "addition" information comes in, then once it's fully understood and processed in the brain, the next outcome could be learning how to multiply. Cognitivism is very much used in math. We are always taught how an equation or process is derived first, then we can use what we learn and apply it to the next higher level learning.

Cognitive Theory of Multimedia Learning (Mayer): http://www.learning-theories.com/cognitive-theory-of-multimedia-learning-mayer.html

Description: This theory is based on three expectations: 1) auditory and visual are the two ways of processing information 2) limited channel capacity and 3) you learn through filtering, selecting, organizing and integrating information.

Useful in Math:

I believe that auditory and visual are very useful multiple intelligence in learning math, especially visual. You can't learn math without seeing the process and calculations in front of you. Math definitely has to be written down.

There is a lot of filtering, selecting, organizing and integrating information in math. Even though in math it is good to write out step by step, however, later on, students can filter out certain steps after they really understand the process.

For example, 2x+3=1; solve for x.
If you don't filter things, it will become a step by step process:
2x+3-3=1-3
2x=-2
½*2x=-2* ½
x=-1

Doing things step by step isn't bad, however, if the students have already grasped a good knowledge on this method, and are just trying to solve x for a higher learning question, then they can filter out certain steps and solve for x quicker.

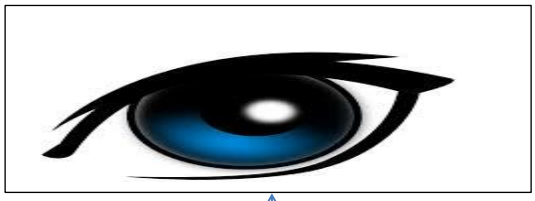
Humanism: http://www.learning-theories.com/humanism.html

Description: This learning theory states that a student's willingness to achieve depends on their own potential. The teacher is only a facilitator. The teacher cannot learn for the students, but can only guide them.

Useful in Math: One of my beliefs in being able to understand mathematics if through doing practice questions. My method of teaching math is teaching for half of the class and the last half allowing students to work on problems. This allows the teacher to facilitate and help the students. If the students can do some questions during class time, the teacher can catch anything the students don't understand them and guide them. I want to be able to help them during class if they get stuck and not go home and not know what to do because there's no one to help them. However, the students need to have motivation in order to want to learn math effectively, and the motivation should come from the teacher with proper modelling for the students.

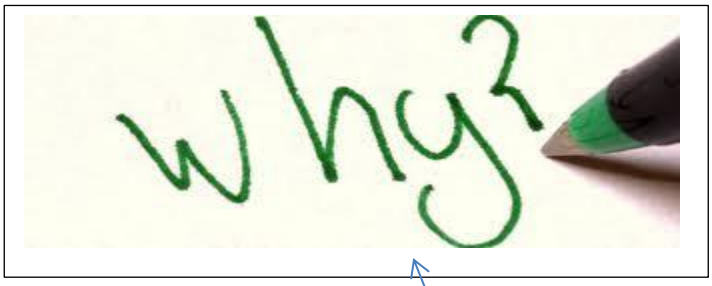
Learning Theories

Social Learning Theory



Description: learn by observing other peoples' behaviour

Attribution Theory (Weiner)



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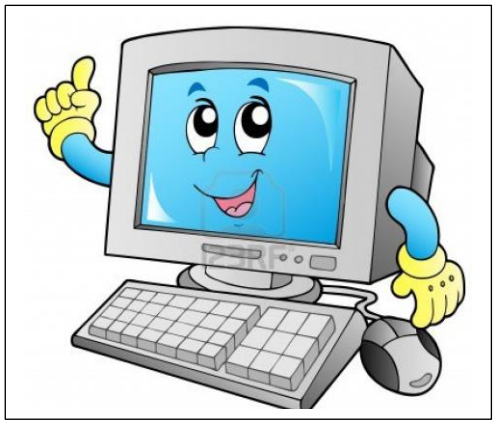

Cognitive Theory of Multimedia Learning

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Humanism

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